

IN THE SENATE OF THE UNITED STATES.

APRIL 8, 1880.—Ordered to be printed.

Mr. McMILLAN, from the Committee on Claims, submitted the following

REPORT:

[To accompany bill H. R. 2270.]

The Committee on Claims, to whom was referred the bill (H. R. 2270) to pay for extra services, relating to the metric system, rendered to the Forty-fifth Congress, have considered the same, and respectfully submit the following report:

The purpose of the bill is to enable the Secretary of the Treasury, out of any moneys not otherwise appropriated, to pay to William Wheeler Hubbell the sum of three hundred and fifty dollars for services as an expert rendered by him to the Forty-fifth Congress respecting the application of the system of metric weights and measures.

The petition of W. W. Hubbell, the claimant, was presented to the House of Representatives at the first session of the present Congress, and referred to the Committee on Claims of that honorable body. Mr. O'Connor, from that committee, reported a bill authorizing the payment of the claim, and recommended its passage, and the bill now before this committee passed the House of Representatives on the 9th of January last.

The facts upon which the claim is based are fully stated in the report of Mr. O'Connor above referred to, and are as follows, to wit:

It appears that a proposition originated in the House of Representatives, by bill 907, to coin gold at the rate of 1.5 grams of pure gold to the dollar, and .9 fine when coined. It seems to have started many years since in the National Academy of Sciences, and was urged by many experts, some in the United States service, but was opposed by the late Dr. Linderman, Director of the Mint.

There would have been a loss or diminution of \$3 and a fraction of intrinsic value in the coinage in a thousand dollars, and for ten years the subject had been repeatedly brought before the Committee on Coinage, Weights, and Measures, and urged for adoption. The finished coin would weigh $1\frac{1}{3}$ grams; the metric system did not embrace thirds, and it was proposed to introduce in it a "tergram," as a new feature, or a new measure of weight.

The subject was not made satisfactory to the committee for a favorable report; and Dr. Hubbell happened to be before the committee on another subject. As he was known to be a man of rare knowledge and resources as an expert, the committee, availing itself of the unexpected opportunity, submitted the subject to him for examination and report for information. In the course of several weeks he submitted his conclusions, embraced in House Mis. Doc. No. 24, pp. 38, 39, which were that—

"The bill 907, on which the statement of November 19, 1877, is made by request, is on a system of tergrams advanced by the American Statistical Association in 1868, on the basis of 1.5 fine gold and $1\frac{1}{3}$ grams standard .9 fine. The 1.5 is in accord with the metric system, which is a decimal system; but the $1\frac{1}{3}$, or ternary division, is not in accord with the metric or decimal system, and cannot be made in accord, as it would always leave a third fraction over. Hence a ternary or tergram is incompatible with the principle of the metric system as recognized in the Revised Statutes and in Europe. 'Systems having for their basis the decigram of gold of nine-tenths fineness, which unit has been advocated by Chevalier, Dr. Parr, and other European political economists' (see report of Dr. Parr to the International Statistical Congress held at the Hague in 1869), are preferred, as stated.

"As a lawyer and scientist and as a legislator, I should prefer to adhere to this essential basis, expressed in grams and its decimal divisions, because the coin as issued and weighed contains the one-tenth of alloy, and are nine-tenths fine as issued by the

United States; and because the *denominational divisions* of coin as originally issued by the United States have been on the decimal or metric principle; and, further, and chiefly, because the metric system is a decimal system exclusively in all its applications of weights and measures, and should be so in coinage, and not ternary.

"The ternary division of grams into tergrams does not give the closest approximation of weight to the present United States coinage weight. It does afford brevity of expression, but that is so seldom stated in words as to be of no importance compared with the diminution of weight and value or intrinsic worth of the coin reduced to tergrams."

In a greater elaboration of the subject he also showed, in another form of bill, how close a formulation could be made, but that even that did not attain the advantages of the metric or decimal system in the desired perfection.

Absolute perfection on simple numeral relations to the gram and decimal also was necessary.

His charges, \$350, are accompanied by letters from the Treasury Department, alleging that Congress should make a special appropriation to pay it, and sections 3680, 3681, 3682, Revised Statutes, appear to require it; the bills also are approved by the chairman of the Committee on Coinage, Weights, and Measures.

The Secretary of the Treasury submitted the subject for an official report to the Coast Survey Office, in charge of the subject of weights and measures.

This official report is in these words:

"UNITED STATES COAST SURVEY OFFICE,

"Washington, July 8, 1878.

"SIR: I have the honor to acknowledge receipt of the department letter of June 22, with inclosures, which, as therein requested, are now returned.

"The amount of compensation in Dr. W. W. Hubbell's bill for his services as an expert before the Committee on Standard Weights and Measures is an exceedingly moderate one.

"Dr. Hubbell is a man of rare knowledge of the subject and of singularly intellectual integrity.

"During the past five years consulting steam-engineers have received as experts in cases in New York as high as \$100 per day, and an engineer of established reputation would not appear two or three years ago at all as an expert for less than \$50 for each day's attendance, even if he should be detained only an hour or two, and I do not think their services could be obtained to-day at a less charge.

"Very respectfully, yours,

C. P. PATTERSON,

"Superintendent Coast Survey and Weights and Measures.

"Hon. JOHN SHERMAN,

"Secretary of the Treasury, Washington, D. C."

Your committee consider the charge of \$350 a very moderate one for the important service rendered in solving the subject which had engaged the attention of the House for about ten years on the same bill substantially (No. 907).

It thus appears that the services upon which this claim is based were rendered by order of a committee of the House of Representatives in respect of a measure of general legislation referred to it by the House of Representatives. It also appears that the value of such services and the amount charged therefor by the claimant have been considered and approved by the chairman of the committee of the House of Representatives in whose behalf the services were rendered, and by the Committee on Claims of the House of Representatives, which reported this bill, and the House of Representatives has concurred in that judgment by the passage of the bill. The claim is not payable out of the contingent fund of the House of Representatives. Under these circumstances the comity prevailing between the two branches of Congress seems to require that the Senate should defer to the judgment of the House determining the propriety of availing themselves of the services of the claimant in the discharge of their duties and the value of such services—the amount being reasonable—and in providing for the payment thereof.

Your committee also concur in the judgment of the House of Representatives on the merits of the claim, and therefore report the bill back with the recommendation that it pass.